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H. Okamoto, L. Qu, and X.-W. Deng: Does EID1 Aid the Fine-Tuning of Phytochrome A Signal Transduction in Arabidopsis? (Insight), 1983–1986
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Aspen

L. Li, X. F. Cheng, J. Leshkevich, T. Umezawa, S. A. Harding, and V. L. Chiang: The Last Step of Syringyl Monolignol Biosynthesis in Angiosperms Is Regulated by a Novel Gene Encoding Sinapyl Alcohol Dehydrogenase, 1567–1585

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AtPhos 43 protein

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AtRanBP1c protein

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B. Reintanz, M. Lehnen, M. Reicnelt, J. Gershenzon, M. Kowalczyk, G. Sandberg, M. Godde, R. Uhl, and K. Palme: *bus*, a Bushy Arabidopsis *CYP79F1* Knockout Mutant with Abolished Synthesis of Short-Chain Aliphatic Glucosinolates, 351–367

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V. Pautot, J. Dockx, O. Hamant, J. Kronenberger, O. Grandjean, D. Jublot, and J. Traas: *KNAT2*: Evidence for a Link between Knotted-like Genes and Carpel Development, 1719–1734

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F. Corellou, C. Brownlee, L. Detivaud, B. Kloareg, and F.-Y. Bouget: Cell Cycle in the Fucus Zygote Parallels a Somatic Cell Cycle but Displays a Unique Translational Regulation of Cyclin-Dependent Kinases, 585–598

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R. A. L. Van der Hoorn, R. Roth, and P. J. G. M. De Wit: Identification of Distinct Specificity Determinants in Resistance Protein Cf-4 Allows Construction of a Cf-9 Mutant That Confers Recognition of Avirulence Protein AVR4, 273–285

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***CIA2* gene**

C.-W. Sun, L.-J. Chen, L.-C. Lin, and H.-m. Li: Leaf-Specific Upregulation of Chloroplast Translocon Genes by a CCT Motif–Containing Protein, CIA2, 2053–2061

Cinnamyl alcohol dehydrogenase

L. Li, X. F. Cheng, J. Leshkevich, T. Umezawa, S. A. Harding, and V. L. Chiang: The Last Step of Syringyl Monolignol Biosynthesis in Angiosperms Is Regulated by a Novel Gene Encoding Sinapyl Alcohol Dehydrogenase, 1567–1585

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N. Yoshida, Y. Yanai, L. Chen, Y. Kato, J. Hiratsuka, T. Miwa, Z. R. Sung, and S. Takahashi: EMBRYONIC FLOWER2, a Novel Polycomb Group Protein Homolog, Mediates Shoot Development and Flowering in Arabidopsis, 2471–2481

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K. Törmäkangas, J. L. Hadlington, P. Pimpl, S. Hillmer, F. Brandizzi, T. H. Teeri, and J. Denecke: A Vacuolar Sorting Domain May Also Influence the Way in Which Proteins Leave the Endoplasmic Reticulum, 2021–2032

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S. Felder, K. Meierhoff, A. P. Sane, J. Meurer, C. Driemel, H. Plücken, P. Klaff, B. Stein, N. Bechtold, and P. Westhoff: The Nucleus-Encoded *HCF107* Gene of Arabidopsis Provides a Link between Intercistronic RNA Processing and the Accumulation of Translation-Competent *psbH* Transcripts in Chloroplasts, 2127–2141

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K. Lennartz, H. Plücken, A. Seidler, P. Westhoff, N. Bechtold, and K. Meierhoff: *HCF164* Encodes a Thioredoxin-Like Protein Involved in the Biogenesis of the Cytochrome b_6f Complex in Arabidopsis, 2539–2551

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Y. Murata, Z.-M. Pei, I. C. Mori, and J. Schroeder: Abscisic Acid Activation of Plasma Membrane Ca^{2+} Channels in Guard Cells Requires Cytosolic NAD(P)H and Is Differentially Disrupted Upstream and Downstream of Reactive Oxygen Species Production in *abi1-1* and *abi2-1* Protein Phosphatase 2C Mutants, 2513–2523

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A. Ikeda, M. Ueguchi-Tanaka, Y. Sonoda, H. Kitano, M. Koshioka, Y. Futsuhara, M. Matsuoka, and J. Yamaguchi: *slender* Rice, a Constitutive Gibberellin Response Mutant, Is Caused by a Null Mutation of the *SLR1* Gene, an Ortholog of the Height-Regulating Gene *GAI/RGA/RHT/D8*, 999–1010
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S. Carpin, M. Crèvecoeur, M. de Meyer, P. Simon, H. Greppin, and C. Penel: Identification of a Ca^{2+}-Pectate Binding Site on an Apoplastic Peroxidase, 511–520

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F. Corellou, C. Brownlee, L. Detivaud, B. Kloareg, and F.-Y. Bouget: Cell Cycle in the Fucus Zygote Parallels a Somatic Cell Cycle but Displays a Unique Translational Regulation of Cyclin-Dependent Kinases, 585–598